



San Diego Regional Water Quality Control Board

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Sent via Email Only
In reply Attn: CW-246113-HYu

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Subject: Investigative Order No. R9-2020-0265, Aliso Beach and Breaching of the Sand Bar Berm at the Mouth of Aliso Creek

Ms. Blackwood and Ms. Carr,

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) periodically receives news media reports and complaints from a local citizen regarding the breaching of the sand bar berm located at the estuarine mouth of Aliso Creek at Aliso Beach in the City of Laguna Beach. According to the reports and complaints, persons on the beach will dig by hand a small channel from the ocean edge of the berm towards the Aliso Creek mouth, which then causes the berm to breach and form a temporary wave at the ocean interface which is used for skim or bodyboarding. This discharged water flow, at an estimated volume of up to 2 million gallons, is comprised of Aliso Creek waters that have accumulated in the creek mouth, which may be impacted by various upstream pollutant sources including but not limited to dry weather urban runoff, stormwater runoff, domestic and wildlife animal waste, periodic sanitary sewer overflows, and surfacing groundwater flows. The San Diego Water Board is issuing Investigative Order No. R9-2020-0265 as set forth below directing Orange County to submit technical information addressing the Aliso Creek mouth discharges (referred to herein as creek discharges) resulting from the public's breaching of the sand bar berm.

HENRY ABARBANEL, PH.D., CHAIR | DAVID GIBSON, EXECUTIVE OFFICER

Background Considerations

Aliso Creek and its watershed extend approximately 18 miles inland from the coast into southern Orange County. The lowermost reach of Aliso Creek, where it flows into the Pacific Ocean, is limited by a rock revetment to the east and supports an estuary system that transitions from a freshwater to a brackish marine environment. Longshore transport of sediment regularly forms a sand bar berm across the mouth of the creek when Aliso Creek flows are minimal. The sand bar berm closes the creek mouth, thereby hydrologically isolating the estuary from significant tidal action and flushing, however creek flows continue to the ocean through subsurface connection. The sand bar berm is periodically breached naturally with storm flows and wave action, or by permitted Orange County Parks (OC Parks) maintenance activities but is eventually reestablished by sediment washing down the creek and by littoral transport action.

In addition to the permitted OC Parks maintenance activities conducted to manage the creek outlet for the protection of property, the sand bar berm is also periodically breached and opened during dry weather by members of the public using the beach for recreation. The pollutants potentially present in the resulting creek discharges, may pose a potential threat to the recreational and marine life beneficial uses of Aliso Beach coastal waters and public health. Furthermore, the creek discharges flow into the ecologically sensitive Laguna Beach State Marine Conservation Area, a coastal area where it is unlawful to injure or damage any living, geological, or cultural marine resource for commercial and/or recreational purposes (pursuant to Fish and Game Code section 2860).¹

The creek discharges that result from beach users breaching the sand bar berm also reportedly render the beach temporarily inaccessible due to the strong force of the released water flow and waves created while the discharge dissipates into the surf zone (see Exhibit A, Photo 1). The absence of any regulatory oversight or monitoring of the creek discharge quality when the sand bar berm is breached by the public has also been raised as an issue in the citizen complaints. This lack of oversight and monitoring appears to be inconsistent with the public health and safety, environmental protection, and monitoring measures implemented during the authorized sand bar berm maintenance activities periodically conducted by OC Parks.

Regulatory Responsibility for the Estuary Discharges

Orange County Protective Measures at the Aliso Creek Mouth.

Orange County Health Care Agency posts signage (Exhibit A, Photo 2) warning the public to avoid contact with ponded or flowing runoff water and to avoid the area where

¹ Additional information regarding the Laguna Beach State Marine Conservation Area (No take) is available on the California Department of Fish and Wildlife website at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=98220&inline>.

runoff water enters the ocean. This advisory sign is located below another Orange County sign (Exhibit A, Photo 3) that requests the public not to enter Aliso Creek because it contains urban runoff that may contain bacteria and that contact with creek water may cause illness. The sign includes a citation to Orange County Code Ordinance (OCCO) sections 3-8-25² and 3-9-35³.

During a site visit to Aliso Beach on September 17, 2020 (Exhibit A, Photos 2-5), the San Diego Water Board observed several actions taken by OC Parks and the City of Laguna Beach to protect public health, such as prohibiting access to the children's play structure (Exhibit A, Photo 4), providing signage to wear masks to protect public health against COVID-19 (Exhibit A, Photo 3), and enforcement by Orange County Lifeguards (OC Lifeguards) informing those without masks that wearing a mask while at the beach is required. Similar enforcement of public health protective measures does not appear to be taken with respect to the creek discharges caused by the public breaching of the sand bar berm. For example, a recent email from Susan Brodeur, Senior Coastal Engineer with OC Parks reported that, "Based on current policy, OC Park Rangers or OC Lifeguards are not empowered to issue citations on any OCCO's, based on current policy."⁴

Water Quality Certification (WQC) No. R9-2017-0087 Compliance Obligations.

Pursuant to WQC No. R9-2017-0087,⁵ OC Parks is authorized to conduct recurring sand bar berm maintenance activities at the Aliso Creek Outlet. The permitted activities include excavation of sediment deposits that have accumulated in the outlet, discharge of the excavated sediment onto the adjacent beach area above the high tide line, grading to prepare the adjacent beach area for recreational use, and periodic breaching of the sand bar berm to re-establish a straightened outlet for Aliso Creek and prevent meandering flows. Routine sediment excavation and grading utilizing earth-moving equipment to recontour the beach and sand bar berm area is performed to prevent the Aliso Creek mouth from migrating upcoast or downcoast and exposing nearby properties to flooding and/or erosion. WQC No. R9-2017-0087 is effective until December 18, 2022, and specifies conditions OC Parks must comply with when performing maintenance activities to avoid impacts to recreation on the beach. In

² See OCCO division 8, article 3, section 3-8-25 available at https://library.municode.com/ca/orange_county/codes/code_of_ordinances?nodeld=TIT3PUMOSAWEDIV8PRPRART3LA_S3-8-25CRCACHRI.

³ See OCCO, division 9, article 5, section 3-9-35 available at https://library.municode.com/ca/orange_county/codes/code_of_ordinances?nodeld=TIT3PUMOSAWEDIV9PUSART5RICRCHCAPIDI_S3-9-35WALAACPRDECH.

⁴ August 12, 2020, Email from Susan Brodeur Senior Coastal Engineer OC Parks to Andrew Willis Enforcement Supervisor California Coastal Commission forwarded to Chiara Clemente Senior Environmental Scientist San Diego Water Board Compliance Assurance Unit on August 25, 2020.

⁵ See San Diego Water Board Water Quality Certification No. R9-0217-0087 issued to Orange County Parks, Outlet Maintenance Program Project October 18, 2017, available on San Diego Water Board website at https://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/projects/2017/R9-2017-0087.pdf.

accordance with WQC No. R9-2017-0087 requirements, when authorized sand bar berm maintenance activities are conducted, OC Parks limits public access to protect public safety, conducts surveys for grunion (if shoreline activities occur between March 15 – August 31) to protect a State managed species, and performs creek and shoreline monitoring and other activities for the protection of human health and the environment. Since 2017 when WQC No. R9-2017-0087 was issued, OC Parks has performed routine sand bar berm maintenance activities on two occasions (July 2019 and April 2020) in accordance with the requirements of the WQC.

Investigative Order No. R9-2020-0265

Water Code section 13225, subdivision (c) (Section 13225), authorizes the San Diego Water Board to require “any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water.” Further information is needed to ascertain whether agency jurisdiction and authority to control the breaching of the berm by the public exists and is appropriately implemented, and to evaluate past, current, and potential impacts to the receiving waters and public health resulting from the creek flows. Accordingly, the County of Orange (OC Parks and OC Environmental Resources) is directed, pursuant to Water Code section 13225, to submit a Technical Report that includes the information listed below no later than March 1, 2021.

1. An explanation addressing whether the public breaches of the sand bar berm are subject to Orange County’s enforcement of its legal authority to control or prevent the discharge of pollutants under the Regional Municipal Separate Storm Sewer System (MS4) Permit (Order No. R9-2013-0001, as amended) or subject to any other of the County’s legal authorities.
2. All information in Orange County’s possession or control regarding evaluations of public health risks associated with the increased flow of Aliso Creek waters onto Aliso Beach in the event of berm breaches. OC Parks has reported that “We are aware that the creek waters may contain elevated levels of bacteria from urban runoff and can be harmful to humans and marine life and the advisory is posted for the public. Bacteria levels are monitored regularly at Aliso Beach, although generally, little correlation has been found between berm opening and an increase in bacteria levels in ocean sampling.”⁶ As part of the Technical Report, please include any analysis Orange County conducted with documentation to support its conclusion that little correlation has been found between the creek discharges during berm openings and an increased risk of exposure to bacteria. Relevant documentation would include but is not limited to the following information:
 - a. Sample locations (both in the estuary and in the beach coastal waters);
 - b. Date and time the samples were collected;

⁶*Supra*, Footnote 4

- c. A list of analytes sampled (e.g., bacteria, human markers, and viral, bacterial, or protozoan pathogens, as available) and analysis results for all sampling events; and
 - d. Corresponding field sampling forms or logs.
3. Provide a copy of the resolution passed by the Orange County Board of Supervisors authorizing recreational activities in the parcel where the sand bar berm is located, referred to in previous communication on this matter (see August 28, 2014, Email to Laurie Walsh from Mark Estoque OC Parks Design).
4. All relevant information in Orange County's possession or control describing how the frequency of public berm breaches and the incidental exposure of persons using the beach to the pollutant loads in the creek discharges, were evaluated and considered in the adoption of Orange County's resolution authorizing recreational activities in the parcel where the sand bar berm is located.
5. A list of all evaluation(s) Orange County has conducted to assess whether the creek discharges and pollutant loads caused by the public berm breaching result in impacts to the Laguna Beach State Marine Conservation Area. Please include a summary of the conclusions for each evaluation.
6. All information in Orange County's possession or control regarding efforts to a) evaluate water quality or other monitoring data collected during the public berm breaches, and b) compare the results to the beach water quality or other monitoring data collected during the permitted sand bar grading activities conducted by OC Parks under WQC No. R9-2017-0087.
7. Information documenting or describing Orange County's efforts to enforce its legal authority to protect public health from potential exposure to pollutants in the creek water released because of the public berm breaching.
8. Information documenting or describing Orange County's efforts to enforce its legal authority to protect public safety in the event of creek discharges caused by public berm breaching. The creek discharges could potentially prevent public access to lifeguard services, obstruct beach recreational uses and compromise safe beach access for a period due to the volume of the flow and force of the temporary wave created.
9. Documentation, through an accounting or similar means, of public safety or environmental concern notifications or complaints from the public received by Orange County pertaining to creek discharges between the years 2017-2020 and the actions taken by Orange County to address the notifications or complaints. OC Parks has reported to the San Diego Water Board, "*The public and our public safety partners are encouraged to notify us whenever there is a public safety or*

*environmental concern so we can initiate a response and remedy the issue.*⁷ In the time since the San Diego Water Board visited Aliso Beach on September 17, 2020, the Board has received three notifications from the public with photo documentation of beach users digging out the sand bar berm and releasing a high flow volume containing unknown levels of pollutants from Aliso Creek estuary onto the beach and into the surf zone.⁸ Two of these incidents occurred on a Saturday when public attendance at the beach is normally high.

Cost Considerations and Need for Required Information

The burden, including costs, of requiring Orange County provide the Technical Report as specified above is reasonably related to the need for the Report and the benefits the San Diego Water Board expects to be obtained from it.

The information required under this Investigative Order concerns water quality control at Aliso Beach and is essential to evaluate the steps Orange County has taken or plans to take to address the threat posed to the recreational and marine life beneficial uses of Aliso Beach coastal waters and to public health from recurrent unpermitted breaches of the sand bar berm at the Aliso Creek Outlet. When developing this Investigative Order, the San Diego Water Board considered the burdens, including costs, Orange County is likely to incur to produce the required Technical Report. The San Diego Water Board's expectation is that the Technical Report can be prepared by Orange County staff through the evaluation of existing data, program implementation, and policies, and will not require collection of new or additional data. Based on the scope of the elements specified for inclusion, the San Diego Water Board estimates that it will take approximately eighty to 100 hours of Orange County staff time to complete the Technical Report. While the Board does not have salary and benefits information specific to Orange County employees, based on State employee classification salary scales, including benefits, for environmental scientists, engineers and legal counsel, eighty to 100 hours spent to prepare such a report and averaged for environmental scientists, engineers and legal counsel would result in approximate costs between \$15,600 – \$19,500.⁹

This Investigative Order is necessary to understand the degree to which Orange County has legal jurisdiction and authority to control or prevent public breaching of the sand bar berm at Aliso Creek mouth. This Investigative Order is also necessary to understand the degree to which Orange County has evaluated the potential risks to public health and marine life from exposure to pollutants as a result of public berm breaching, and the

⁷ Ibid.

⁸ Saturday, September 26, 2020 (Doc No. 8899092), Wednesday, September 30, 2020 (Doc No. 8899096), and Saturday, October 3, 2020 (Doc No. 8899098). The public reports submitted to the San Diego Water Board via email are date stamped and included photo documentation of public berm breaching at Aliso Beach.

⁹ Due to the various employee classifications that may be involved with preparation of the Technical Report an average of \$195.00 per hour for staff work was used for estimating purposes.

potential threat to public safety and lifeguard services access. Continued allowance of frequent unpermitted berm breaching by persons on the beach could result in elevated discharges of pollutants to the Pacific Ocean. If the frequent uncontrolled and unmonitored sand berm breaching continues, public health and safety, receiving water quality, and marine life may be threatened. While the precise number of hours/cost of staff time to prepare the Technical Report is not known, based on the above information, the San Diego Water Board finds that the burdens, including costs, of preparing the Report bear a reasonable relationship to the need for the Report and the benefit to be obtained from the Report.

Please submit written correspondence in response to this investigative Order to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to the San Diego Water Board, 2375 Northside Drive, Suite 100, San Diego, CA 92108. Each electronic document must be submitted as a single file, in Portable Document Format (PDF) format, and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: **PIN: CW-246113-HYu**. For questions pertaining to the subject matter, please contact Helen Yu at (619) 521-5893 or Helen.Yu@waterboards.ca.gov.

Respectfully,

David W. Gibson
Executive Officer

DWG:kd:db:lw:hy

Enclosure: Exhibit A, Photographs

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Aliso Creek Watershed Copermittees

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Exhibit A Photographs



Photo 1: Berm Breach on September 10, 2020. Screenshot from video taken by Mike Beanan, Laguna Bluebelt Coalition.



Photo 2: September 17, 2020 Visit. Photo taken by David Gibson, San Diego Water Board.



Photo 3: September 17, 2020 Visit. Photo taken by David Gibson, San Diego Water Board.



Photo 4 – Aliso Beach September 17, 2020 Visit. Photo taken by David Gibson, San Diego Water Board.



Photo 5 – Aliso Creek connected to Pacific Ocean at Aliso Beach during September 17, 2020 Visit. Photo taken by David Gibson, San Diego Water Board.